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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/796,961	03/11/2004	Koji Hirota	250349US-3S CONT	4004
22850	7590	07/27/2006		
C. IRVIN MCCLELLAND OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER DEGHAN, QUEENIE S	
			ART UNIT 1731	PAPER NUMBER

DATE MAILED: 07/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/796,961

**Applicant(s)**

HIROTA ET AL.

**Examiner**

Queenie Dehghan

**Art Unit**

1731

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Specification***

1. The disclosure is objected to because of the following informalities: On page 10, line 19, Figure 3 does not depict the open position of the dies.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

3. Claims 13-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
4. Claim 13 is unclear as to which component has the rockable feature, the base, the rack or the glass sheets.
5. Claim 14 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. The omitted step is a method step for combining the various components of the image display apparatus. The only step indicated is for forming a glass frame, only one of the components of the image display apparatus. Therefore, the preamble of claim 14 is not given patentable weight.
6. Claim 15 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such

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omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: the apparatus for forming a glass frame and how the apparatus is used to form an image display apparatus.

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 8, and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Kato et al. (English translation of JP Abstract 60-210550). Kato et al. disclose a method for joining end portions of belt shaped glass sheets, wherein the end portions are thermally softened, overlapped, and clamped from both sides in the thickness direction, thereby joining the lap portions together (abstract).

3. Claims 5, 11, and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Rose et al. (3,527,663). Rose et al. disclose a joining apparatus for holding end portions of the strips together (via glass sheets), a heating element for softening the strips and a clamping means (col. 1 lines 70-72, col. 2 lines 14-16, 19-22, 30-32, col. 3 lines 51-22).

4. Claims 5-6 and 11-12 rejected under 35 U.S.C. 102(b) as being anticipated by Hirotsu et al. (5,071,461). Hirotsu et al. disclose a manufacturing apparatus comprising

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a glass sheet holding portion, a heating mechanism for softening glass sheets, and a clamping mechanism comprising of pressure dies (molds) that faces each other and are movable from an open position to a clamping position (col. 9 lines 33-43, line 67 to col. 10 line 3, col. 11 lines 51-54, figure 1).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 1, 8, and 14 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Rose et al. (3,527,663). Rose et al. disclose a method for joining end portions of strips to provide sealed relationship

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between two glass sheets. The method comprises thermally softening the strips, overlapping end portions of the strips, and clamping down on the end portions of the strips to join the overlapping portions (col. 2 lines 19-22, 30-32, col. 3 lines 51-22).

Although not explicitly expressed, it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize glass strips as the strips to form the glass frame for sealing between the two glass sheets, as it is well known in the art to utilize glass to form a seal between sheets of glass for liquid crystal displays.

8. Claims 1, 3-4, 8, 10, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ando (English Translation of JP 2000-211630) in view of Marx (3,425,147). Ando discloses a method for forming a glass frame comprising heating the end portions of glass plates to soften them and joining the glass plates at the end portions ([0059], drawing 7). However, Ando does not mention clamping the ends together. Marx teaches of joining glass sheets together, such that the ends are superposed on each other to form corner portions, holding the sheets in a vertical plane and clamping the ends of the glass sheets (col. 1 lines 10-15, col. 2 lines 42-44, figures 1 & 2). Furthermore, Marx teaches end corners of glass sheets that are partially notched (figure 3). It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the clamping step and notches of Marx in the method of Ando in order to secure the glass sheets together.

9. Claims 2 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kato et al. (English translation of JP Abstract 60-210550), as applied to claims 1 and 8, in view of Cypher et al. (3,223,504). Kato et al fail to disclose the length of time the

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glass sheets are clamped. Cypher et al. teach clamping glass sheets for 2 seconds before retracting the clamps. It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the clamping time of Cypher et al. since 2 seconds is a sufficient amount of time for impressing the desired shape into the softened glass, as taught by Cypher et al.

10. Claims 7 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirotsu et al. (5,071,461), as applied to claims 6 and 11 above, in view of Cathers (4,228,993) and Andrewlavage, Jr. (6,616,025). Hirotsu et al. fail to disclose a base supporting a rack and sliding mechanism for handling the glass sheets. Cathers teaches of a base (32) that is rockable around a substantially horizontal axis of rotation, supporting a rack (30) that capable of orienting the glass sheets in any desired direction (i.e. vertical) (fig. 1). Andrewlavage, Jr. also teaches a base (29), which supports the rack (17) so that glass sheets are within a vertical plane and are rockable around a substantially horizontal axis of rotation (figure 12). Furthermore, Andrewlavage, Jr. teaches of a sliding mechanism (37a, 37b), which supports the rack for movement in the longitudinal direction of the glass sheet with respect to the base (fig. 12, col. 5 lines 18-26). It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the base, rack, and sliding mechanisms of Cathers and Andrewlavage, Jr. in the apparatus of Hirotsu et al. for efficient and automatic handling of the glass sheets.


**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Queenie Dehghan whose telephone number is (571)272-8209. The examiner can normally be reached on Monday through Friday 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Q Dehghan

  
ERIC HUG  
PRIMARY EXAMINER